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ABSTRACT

Within the secondary school setting, counselors and educators increasingly need to look beyond the traditional dichotomy between the college bound and the noncollege bound student. To examine the relationship between expressed and measured vocational interests for a sample of vocational technical students and a sample of noncollege bound students, 61 vocational technical students and 83 noncollege bound students completed a Likert-type scale on vocational interests and the Career Assessment Inventory. An analysis of the results showed no significant differences between expressed and measured interests. For vocational technical students, the highest correlations were found for electronics, carpentry, science, and medical service. For noncollege bound students, the highest correlations were found for office practice, religious activities, science, and medical service. On both measures, the two groups differed significantly in all areas except agriculture, nature/outdoors, science, numbers, and arts and crafts. In addition, on the expressed interest measure, the subjects differed on religious activities, and sales and food service. These findings suggest that the two groups have different educational orientations and career interests, and they should be counseled accordingly. (BL)

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Summary

"Expressed and Tested Vocational Interests of Vocational Technical Students Versus Non-College Bound Students Using the Career Assessment Inventory

The purpose of this study was to ascertain the relationship between expressed and measured vocational interests for a sample of vocational technical students and a sample of non-college bound, non-vocational technical students.

The design included obtaining expressed vocational interests on a Likert-type scale and measured vocational interests by means of the Career Assessment Inventory, a "blue collar" version of the Strong-Campbell Interest Inventory. The relationship between expressed and measured vocational interests is examined, together with differences in consistency for both sample populations.

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Within the secondary setting, counselors and educators increasingly need to look beyond the traditional dicotomy of the college bound and the non-college bound student. A dilemma encountered by many counselors is how to assess the vocational needs and interests of the non-college bound, less academic student. Perhaps a different strategy for counseling should be applied to the student who has no academic aspirations. Career or vocational counseling is frequently neglected for the atypical high school student whose needs and interests may exceed the traditional high school curriculum as well as the more popular interest measurement tools.

Yet, asking a young person to state their vocational interests seems to be a common practice, but to date there exists few research findings that can help counselors interpret such expression of choice. Further, because of time and expense, standardized interest inventories are administered in connection with only a small fraction of the vocational counseling that occurs in the school setting. The administration of a standardized interest inventory is also severly limited when there could be a discrepancy between expressed and measured interests, especially if the young person represents a specialized population such as the non-college bound or the vocational technical student.

The value of one's expressed interest has been the subject of much debate among the counseling community. A person's self-expressed or declared interest has received little attention and researchers have tended to deprecate its value. The evolution of this perspective can be traced

again through such proponents as Strong, 1943; Berdie, 1960; and Super and Crites, 1962.

Recently Slaney and Russell (1981) suggested that the expressed interests of clients should be given careful consideration by vocational counselors. They assert that the studies reviewed by Dolliver (1969) involving the SVIB indicated that expressed interests have predictive validity in terms of college major or job entry choice that exceeds or equals that of inventoried interests. A number of other studies using a variety of subject groups, time intervals, instruments and methodologies support Dolliver's conclusion: Bartling & Hood, 1981; Borgen & Seling, 1978; Dolliver & Will, 1977; Gade & Soliah, 1975; Holland & Gottfredson, 1975; O'Neil & Magoon, 1977; Touchton & Magoon, 1977.

Other points summarized from a number of studies are: (1) when expressed and inventoried interests are not in agreement, expressed interests are more predictive than inventoried interests (Bartling & Hood, 1981; Borgen & Seling, 1978; Dolliver & Will, 1977; Holland & Gottfredson, 1975; Holland & Lutz, 1968; Touchton & Magoon, 1977) and (2) when expressed and inventoried interests are in agreement, predictability of job entry choice is higher than when they are not in agreement (Bartling & Hood, 1981; Borgen & Seling, 1978; Dolliver & Will, 1977; Holland & Gottfredson, 1975; Touchton & Magoon, 1977). From this perspective, perhaps expressed interests should receive greater attention in counseling. Inventoried interest might be diagnostically useful in terms of their relatedness to expressed interests.

Researchers disclose the need for using both expressed and inventoried interests in vocational counseling (Berdie, 1950; Wightwich, 1945; and Rose & Elton, 1974). Whitney (1969) further asserted that since expressed vocational choice is predictive of future employment, it offers a measure of the client's interests, personality and background characteristics which are free from certain inventory limitations.

This study ascertained the relationship between expressed and measured vocational interests for a random sample of vocational technical students and a random sample of non-college bound, non-vocational technical students on the secondary level. The findings lend themselves to additional insights into the use of such information for vocational counseling for this similar (non-college), yet dicotomous (technical/non-technical) sample.

METHOD

Subjects. The sample consisted of randomly selected students among five high schools, and the vocational technical center. The sample size involved 61 eleventh grade students from the vocational technical center and 83 eleventh grade non-college bound, non-vocational technical students from the five respective high schools. The total population of secondary students consisted of approximately 1250 eleventh grade students among five high schools in a community of approximately 114,226 residents. The median family income was $18,933. Total employment (1981) was 47,946 with an unemployment rate of 5.5%. Skilled, semi-skilled, sales, labor and service occupations made up approximately forty-six percent of the

work force.

Both samples were comparable regarding their decision to not attend college. A difference was that the vocational technical sample planned to enter a post-secondary occupation directly related to their two-year comprehensive occupational training experience in high school.

MEASURES

The design utilized for this study included obtaining the expressed vocational interests on a Likert-type scale and measured vocational interests by means of the Career Assessment Inventory (CAI). The CAI developed by Charles B. Johansson (1976) consists of three divisions specifically:

6 General Occupational Themes

22 Basic Interest Area Scales and

44 Occupational Area Scales.

The six general occupational themes are based on the six general occupational personalities by Holland. The twenty two basic interest scales are measured by the strength and consistency of specific interest areas. Occupational scales reflect the degree of similarity between the respondent's interests and those of men/women employed in particular occupations. The CAI was designed to assist in career counseling of high school students and adult who are seeking immediate career entry and for individuals interested in careers requiring some post-secondary education such as technical vocational or business school. Holland's vocational model (R.I.A. S.E.C.) provides additional information for understanding a number of

personal attributes and characteristics that may predispose a person to enter a vocational field that is congruent with his/her individual style.

To gather information and data on expressed vocational interests a locally constructed inventory was developed. A standardized oral emplanation of each of the corresponding twenty-two basic interest areas was presented to each subject, then they were instructed to mark their expressed choice on the inventory. Opposite each interest area was a five point Likert-type scale ranging from "like very much" to "dislike very much.

ANALYSIS

The twenty two basic interest areas of the CAI was correlated for significance with the locally constructed expressed inventory. The statistical procedure used was the Pearson Product Moment Correlation Coefficient. If a significant correlation was found it was considered that no difference between expressed and tested data existed with both samples.

A one-way analysis of variance was performed to estimate the samples variance between group (i.e., non-college bound versus vocational technical students) to ascertain if there was a difference between vocational interest and occupational choice.

RESULTS

Table 1 presents the correlation coefficients between expressed and measured vocational interests for the non-college bound and vocational technical students respectively. Also presented are the means for each set of interest data. Most of the correlation coefficients are in the

upper .50's. According to Crites (1969), correlation coefficients of perceived and measured interests tend to center in the .40's and .50's.

The correlation for vocational technical students in three work areas - mechanical fixing, writing, and childcare - were low and not significant at the .01 level. The correlations were sufficiently high in each of the remaining work areas to indicate no significant difference between expressed and measured interest. Highest correlations were found for electronics, carpentry, science and medical service. The correlations for non-college bound students revealed no significant differences between expressed and measured interests. The highest correlations were found on office practice, religious activities, science, and medical, the lowest were found on agriculture.

Insert Table 1 about here

Further information about the vocational interest difference between vocational technical students and non-college bound students on expressed and measured data was also found.

Table 2 provides the means, standard deviation and F-ratio for measured CAI interests between the two groups. There was significant difference at the .001 level for all interest areas except agriculture, nature/outdoors, animal science, numbers, arts and crafts.

Insert Table 2 about here

Table 3 provides the means, standard deviation and F-ratios on expressed interests between groups. There was a significant difference between vocational technical students and non-college bound on all interest areas except agriculture, nature/outdoors, science, numbers, arts/crafts, religious activities, sales and food service. One could infer that both groups differed considerably in the consistency of their expressed and their measured interests.

Insert Table 3 about here

DISCUSSION

The hypothesis that there would be no difference between expressed and measured interest of both vocational technical students and non-college bound students was supported. The relationship between expressed and measured interests in both samples was significant. As the literature has shown, when congruency occurs between a person's expressed and measured interests, predictability is noticeably enhanced. If however, the counselor perceives a need for a thorough analysis of a student's occupational interests both expressed-choice and a standardized inventory could be considered for a more comprehensive appraisal. If the use of a comprehensive inventory is not feasible, then the counselor could consider expressed choice especially if the student is engaged in an occupational training opportunity to provide job-entry skills or if the counselee has a "developed choice". The developed choice frequently overlooked from this sample is their decision not to attend college. Using an inventory,

one designed primarily for the non-college bound student, focusing on occupations that require less post-secondary training is also most appropriate. An assessment instrument based on Holland's model for occupational interests provides additional information to the counselee.

Strong evidence was also provided to indicate a difference between expressed and measured interest between the two samples. Information from this study pertaining to the differences between non-college bound and vocational technical students implies that a different criteria of counseling should be administered to the student who has no academic aspirations. Peripheral findings between the two groups of students from the administrative indices on the CAI revealed a difference in their educational orientation, career interests and reflected occupational themes. Vocational technical students were predominately realistic in their occupational orientation; the non-college bound, non-vocational technical student was more conventional and enterprising. The vocational technical sample seemed to have become more career specific in their occupational aspirations, to have made a choice, narrowed down their alternatives, and assumed a vocational identity when compared to the non-college bound sample. Perhaps vocational technical students have more reliable and valid interests because they have more career training opportunities. The non-college bound seemed to be less advanced in vocational maturity, reflecting a stage of vocational experimentation with many interests. For the non-college bound sample, the period following high school could be characterized by floundering or haphazard and poorly conceived changes

of jobs or occupations.

The vocational technical student did have one debilitating disadvantage in that little attention is given to the value of manual trades and occupational technical skills. There seems to be a stereotypic association with the vocational technical student as one with lower academic ability who dislikes school. This was reinforced by the low educational orientation index of the CAI.

What we need is a system to prepare school age youth for entrance to labor market areas which have a greater potential for expansion to meet the diversified technical and skilled needs of society. There is a need for the implementation and expansion of experiences in business and industry for this student population. "Hands-on" experiences are particularly important for those who may terminate formal education either before or at the completion of high school.

The results seem to warrant conducting a larger more comprehensive study, using larger samples and perhaps a triennial following of job-entry choice. An area for further research could be to ascertain whether there is a relationship between expressed and measured interests and measured and expressed abilities. Tierney and Herman (1973) discovered that adolescents tended to produce poor self-estimates of abilities. A greater congruency between expressed and measured interests and abilities could burther enhance job-entry reliability and success.

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Table 1 Expressed and Measured Vocational Interests of Vocational-Technical Students and Non-College Bound Students

means and correlation coefficients

	Non-college Bound (N=82)			Vocational-Technical (N=61)		
Work Area	Expressed Mean	Measured Mean	r	Expressed Mean	Measured Mean	r
Mechanical/Fixing	2.58	48.85	.66	1.83	57.34	.38
Electronics	2.96	49.57	.68	2.24	56.96	.78
Carpentry	2.61	47.28	.58	1.93	55.44	.73
Manual-Skilled Trades	3.00	48.82	.48	2.09	56.67	.42
Agriculture	2.82	43.72	.42	3.16	46.34	.58
Nature/Outdoors	1.92	42.47	.51	2.36	41.32	.68
Animal Science	2.61	48.46	.59	3.31	43.67	.29
Science	3.37	45.02	.75	3.67	41.68	.74
Numbers	2.76	48.22	.68	3.26	43.23	.56
Writing	2.86	46.39	.67	3.70	38.23	.31
Performing/Entertaining	2.41	50.34	.64	3.29	42.41	.45
Arts/Crafts	2.61	43.95	.61	2.45	39.32	.60
Social Service	2.14	47.70	.60	3.19	37.19	.48
Teaching	2.53	49.06	.68	3.83	38.77	.43
Childcare	2.37	50.56	.81	3.78	38.26	.35
Medical Service	2.50	49.92	.75	3.39	40.67	.71
Religious Activities	2.70	50.84	.76	3.34	42.96	.65
Business	2.28	47.17	.56	2.88	37.47	.42
Sales	2.78	52.42	.53	3.26	46.67	.49
Office Practice	2.89	48.41	.77	3.86	38.77	.55
Clerical	3.12	50.98	.70	3.90	43.29	.54
Food Service	3.41	49.32	.64	3.24	42.95	.67

$p < .01$ No significant difference exists between expressed and tested interests.

Table 2 Means, Standard Deviations, and F Ratios on the Career Assessment Inventory for Vocational-Technical and Non-College Bound Students

	Non-college Bound (n=82)		Vocational-Technical (n=61)		
Work Area	$\bar{X}$	SD	$\bar{X}$	SD	F
Mechanical/Fixing	48.85	10.10	57.34	7.54	30.41
Electronics	49.57	10.30	56.96	9.23	19.66
Carpentry	47.28	10.30	55.44	8.14	26.11
Manual-Skilled Trades	48.82	9.38	56.67	8.12	27.32
Agriculture	43.72	10.33	46.34	10.29	2.26 *
Nature/Outdoors	42.47	12.35	41.32	10.86	0.33 *
Animal Science	48.46	10.62	43.67	7.77	8.86 *
Science	45.02	12.01	41.68	11.51	2.79 *
Numbers	48.22	9.81	43.23	10.65	8.40 *
Writing	46.39	9.94	38.23	7.79	28.17
Performing/Entertaining	50.34	10.15	42.41	9.68	22.18
Arts/Crafts	43.95	9.21	39.32	7.93	9.89 *
Social Service	47.70	11.46	37.19	8.48	36.40
Teaching	49.06	11.09	38.77	8.26	37.10
Child Care	50.56	12.14	38.26	7.19	49.52
Medical Service	49.92	10.82	40.67	7.07	33.82
Religious Activities	50.84	11.88	42.96	7.59	20.51
Business	47.17	10.88	37.47	8.87	32.38
Sales	52.42	10.38	46.67	8.40	12.59
Office Practice	48.41	12.04	38.77	6.13	32.76
Clerical	50.98	9.99	43.29	7.95	24.54
Food Service	49.32	11.21	42.95	10.29	12.12

$p < .001$

*Indicates nonsignificant F ratio resulting from an analysis of variance at the .001 level; therefore, a significant difference exists between groups on measured interests.

Table 3 Means, Standard Deviations, and F Ratios on Expressed Interests for Vocational-Technical and Non-College Bound Students

	Non-college Bound (n=82)		Vocational-Technical (n=61)		
Work Area	$\bar{X}$	SD	$\bar{X}$	SD	F
Mechanical/Fixing	2.58	1.15	1.83	1.11	1..19
Electronics	2.96	1.23	2.24	1.13	12.68
Carpentry	2.61	0.97	1.93	0.98	16.63
Manual Skills	3.00	1.12	2.09	0.87	27.20
Agriculture	2.82	1.10	3.16	1.21	2.93 *
Nature/Outdoors	1.92	0.97	2.36	1.29	5.22 *
Animal Science	2.61	1.21	3.31	1.10	12.61
Science	3.37	1.34	3.67	1.27	1.74 *
Numbers	2.76	1.28	3.26	1.22	5.36 *
Writing	2.86	1.37	3.70	1.18	14.57
Performing/Entertaining	2.41	1.30	3.29	1.30	15.89
Arts/Crafts	2.61	1.10	2.45	1.17	0.61 *
Social Service	2.41	1.06	3.19	1.07	33.61
Teaching	2.53	1.19	3.83	1.09	44.12
Childcare	2.37	1.34	3.78	1.12	43.79
Medical Service	2.50	1.17	3.39	1.25	19.01
Religious Activities	2.70	1.26	3.34	1.18	9.40 *
Business	2.28	1.12	2.88	1.12	10.09
Sales	2.79	1.17	3.26	1.12	6.09 *
Office Practice	2.89	1.32	3.86	1.05	22.60
Clerical	3.12	1.29	3.90	1.02	15.12
Food Service	3.41	1.24	3.24	1.31	0.61 *

$p < .001$

* Indicates nonsignificant F ratio resulting from an analysis of variance; therefore a significant difference exists between groups on expressed vocational or career interests.